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TO: Kent Dorr, K-H Project Management, Building T130F, X6034

FROM: *M10 for* Doug Steffen, RMRS E/C/D Project Management, Bldg T130F, X2164

DATE: August 7, 1997

SUBJECT: Building 123 Proposed Action Memorandum (PAM):  
Response to DOE and CDPHE Comments

Below are the proposed responses to comments received from DOE and CDPHE on the Building 123 PAM. The PAM was modified in accordance with the responses provided below. Text has been added to or deleted from the document since the last revision, thus requiring changes in page numbers and topic heading and subheading numbers. In such cases, the current heading numbers have been included in the response. Please review these responses and provide comments such that any modifications can be added to the PAM.

Originator: Bill Fitch, DOE

*1 Section 2.2.1*

*Last Para states that "radiological surveys, sampling and analysis will be done for the presence of beryllium, asbestos, lead, PCBs, and other potential contaminants." The next sentence states "Results are summarized in Section 2.3." First sentence was in the draft and the second sentence was added for the final. Note the inconsistency. No action is required.*

**RESPONSE**

Section 2.4 was changed to state the following: "Pursuant to RFCA criteria, a Reconnaissance-Level Characterization Survey (RCLS) was conducted to identify any hazardous and radioactive contaminants in the Building 123 Cluster. The survey identified no significant hazards associated with Buildings 113, 114 nor 123S, and indicated that the majority of Building 123 is considered to be "unaffected" (low potential for hazardous or radiological contamination) based on operational and process history. However, the following rooms in Building 123 were previously, or currently, posted as Radiation Control Areas (RCAs) or Radioactive Material Management Areas (RMMAs) and are therefore considered to be "affected" (potential for low-level contamination) and will require a more detailed survey prior to decommissioning: Rooms 103A, 105, 112, 123, 124, 125, 126, 127, 135, 149, 155A, 156, 157, 158, and 163."

**ADMIN RECORD**  
B123-A-00020

- 2 *Page 13, Figure 2-5 is really a table*

RESPONSE

Figure 2-5 was changed to Table 2-4 and is now indicated on Page 15

- 3 *Pleased to see how the contaminant information is summarized and presented Is there some way to summarize the magnitude or concentration? Would like a copy of the "Asbestos Characterization Report" and the "Addendum to Building Inspection (April 1997)"*

RESPONSE

Copy of document was provided to reviewer

- 4 *Page 15, Section 2.3.4, RCRA Units*

*(I) assume that there are no RCRA Units within the building (I know Unit 40 is everywhere)*

RESPONSE

The following comprises Section 2.3.1 "The Building 123 area encompasses a portion of RCRA Unit 40, the plant-wide process waste system, a network of tanks and underground and overhead pipelines constructed to transport and temporarily store process wastes from point of origin to on-site treatment and discharge points RCRA Unit 40 includes all overhead and underground and process waste lines in and around Building 123 No other RCRA unit exists in the Building 123 area "

- 5 *Page 17, Section 3.2.1, 2nd Para*

*Isn't the Project Executive Plan a specific planning document? Shouldn't it be listed here?*

RESPONSE

The PEP was not added to the list in Section 3.1.1, since the document has yet to be approved

- 6 *Page 21, Section 3*

*Stated that a Building 123 Decommissioning Project Health and Safety Plan (Rev 0) has been developed Do we have something to send out to a member of the public who requests one? Would like a copy*

RESPONSE

Specific citation of the document was changed to general citation in Section 3.1.1, as this document has yet to be approved and has not been released for public comment. A copy of the document was provided to the reviewer

- 7 *In same paragraph*

*Stated that an Activity Hazard Analyses will be prepared Requests a copy of document.*

RESPONSE

A copy of the document will be provided to the reviewer once it has been prepared

8 Page 23, Section 3.5

*Waste management activities for the project are described in Building 123 Decommissioning Project Waste Management Plan Rev 0 (May 1997) Requests a copy of plan*

RESPONSE

Specific citation of the document was changed to general citation in Section 3.1.1, as this document has yet to be approved. A copy of the document was provided to the reviewer.

9 Section 4.0, Environmental Impacts

*Section is weak. I hope the stakeholders who are concerned about canceling the Sitewide EIS don't attack this section. Will ask the RFFO NEPA Officer to look at this and make suggestions.*

RESPONSE

NEPA section (4.0 "Environmental Impacts") has been revised to include the Proposed Action and Alternatives, including an impact analysis of the Proposed Action.

10 Page 24, Section 4

*Reconnaissance Level Characterization Report is finished. Requests a copy of report.*

RESPONSE

Specific citation of the document was changed to general citation in Section 3.1.1, as this document has yet to be approved. A copy of the document was provided to the reviewer.

11 Section 4, Last paragraph

*Paragraph is weak. The Programmatic Agreement among the Rocky Flats Field Office, the Colorado State Historic Preservation Officer and the Advisory Council on Historic Preservation concerning Historic and Cultural Property at the Rocky Flats Environmental Technology Site has been submitted for signing. Checking to see if it is in place. Building 123 was identified as a Potentially Historic Structure and may be subject to requirements for recordation or preservation. Documentation was prepared and submitted for Building 123 on April 30, 1997. Expect this documentation to be adequate and anticipate that the SHPO will concur in our decision to demolish B123.*

RESPONSE

The section (4.2.7) was revised to indicate that the agreement has been approved. Streetscape photographs will be taken of the building before it is to be demolished.

12 Guard Post 113

*Post was identified among those guard posts which may be subject to requirements for recordation or preservation, and documentation was prepared and submitted for the guard house complex on April 30. Suggest we strengthen this language in succeeding documents to strongly state we are complying and are meeting the requirements for documentation.*

**RESPONSE**

The following was added to Section 4 2 7: "Building 113 is a guard post of the type denoted for documentation as a historical building. The documentation is under preparation and scheduled to be completed by September 30, 1997 "

**13 Page 25, Section 5 0, First Paragraph, Line 3**

*States that "ARARs are identified in the draft DPP" They used to be but aren't anymore*

**RESPONSE**

Reference to the DPP document was removed from the entire document, since it has yet to be approved

**14 Section 6 0**

*States that Figure 6-1 is attached but it isn't Requests copy of figure*

**RESPONSE**

Figure 6-1 was apparently not attached to reviewers copy The figure, *Level 1 Schedule for the Decommissioning and Demolition of Building 123*, was changed to Attachment C in the third revision

**15 Section 2 1 1 , RCRA Unit 40**

*"Closure of RCRA Unit 40 will be conducted in accordance with the Site's Part B RCRA permit " Unit 40 is not a permitted unit Partial closure of this interim status unit requires submittal and approval of a closure plan in accordance with Part 265, Subpart G of the Colorado Hazardous Waste Regulations (CHWR) which includes a 30-day public comment period*

**RESPONSE**

This reference was removed from the text. A closure plan is currently under preparation as indicated in text in Sections 2 3 1 and 3 1 3 3

**Originator: Office of Chief Counsel, DOE**

**1 Cover letter**

*A Proposed Action Memorandum should not go to the reading rooms before DOE approval*

**RESPONSE**

The PAM was submitted for public comment before DOE approval Future PAM documents will be submitted to DOE approval prior to submittal to the public

**2 Section 2 1, Line 3**

*The reference should be to the Site's Life Cycle Baseline rather than the Ten Year Plan*

**RESPONSE**

Text was changed in Section 1 0 to indicate the following "The effort will be managed as a non-time critical interim remedial action under the Comprehensive Environmental

Response, Compensation, and Liability Act (CERCLA), with respect to the RFETS Life Cycle Baseline ”

3 Section 3 0, Line 1

*It is not correct to reference the draft DPP The flow chart from the DPP could be included in the PAM as the process to be used in this project*

RESPONSE

All references to the DPP were removed from the document. The flow chart was not included in the document

4 Section 3 0, Line 5

*It is not correct to say that “plans will be prepared and approved by RFETS” In RFETS prepares and submits and the LRA approves*

RESPONSE

The text was changed in Section 3 0 to indicate the following “All compliance documentation and project plans will be prepared and approved by RFETS Decommissioning and Demolition Management under a Project Execution Plan to ensure that decommissioning efforts are conducted in a safe and compliant manner”

5 Section 3, Line 9

*Suggest moving this sentence, which begins “Once the building is ready for decommissioning ” Up before the sentence which begins “As part of ”*

RESPONSE

The entire section (3 0) was revised The two sentences were combined to state “All building utilities and associated facility safety systems will be disconnected prior to commencement of building demolition ”

6 Section 3 0, Line 13

*Suggest using another word instead of “following” Such as “Remediation of contaminated soil will be completed as indicated by the results of the analyses ”*

RESPONSE

The sentence in Section 3 0 at the end of the paragraph was expanded to state the following “Underground pipelines will be managed with respect to soil sample analyses results Soil remediation, if necessary, will be conducted with respect to RFCA Action Levels in a manner that is protective of human health and the environment ”

7 Section 3 1, Line 1, 1st Word

*Suggest changing “The” to “A”*

RESPONSE

The sentence in Section 3 0 was revised to state “The primary decommissioning objectives will be accomplished according to an integrated scope, schedule and cost control system ”

8 Section 3 2 1, Line 6

*The other regulatory activities should list the requirements of historical preservation act and reference the site programmatic consultation w/SHPO and US National Park Service*

RESPONSE

Section 4 2 7 addresses this concern and states the following "The programmatic agreement between the DOE Rocky Flats Field Office, the Colorado SHPO, and the Advisory Council on Historic Preservation has been approved. Building 113 is a guard post of the type denoted for documentation as a historical building. The documentation is under preparation and scheduled to be completed by September 30, 1997 and Arrangements are being made to take streetscape photographs of Building 123 which has been designated as a Potentially Historic Structure. The terms of the agreement will be met before initiation of decommissioning activities " The agreement is also referenced in Section 3 1 1

9 Section 3 2 1, 2nd Para , Line 1

*The Programmatic Consultation with the SHPO is a planning document which should be referenced*

RESPONSE

See above response

10 Same Reference

*The Reconnaissance Level Characterization Report should be an appendix to this PAM as should the other plans cited (unless they are available in the reading rooms already)*

RESPONSE

None of the supporting documents will be included as Appendices However, Section 3 1.1 was revised to state that the documents "will also be available to the general public upon request "

11 Section 3 2.2, Line 1

*Suggest changing "governed" to "conducted"*

RESPONSE

The entire sentence was revised in Section 3.1.2.1 to state "Characterization activities associated with the decommissioning effort include survey of interior building surfaces "

12 Section 3 2 2, Line 6

*The Sampling and Analysis Plan should be an appendix to this PAM*

RESPONSE

None of the supporting documents will be included as Appendices However, Section 3 1 1 was revised to state that the documents "will also be available to the general public upon request "

13 Section 3.2.2, 2nd Para , Line 3

*The draft MARSSIM should be an appendix to this PAM available in the reading rooms Same thing for draft NRC Manual*

RESPONSE

The MARSSIM and NRC NUREG documents were added as Appendix A

14 Page 20, Unconditional Radiological Release Criteria, Line 1

*The clause "In accordance with the RFCA " Should have a specific cite*

RESPONSE

The sentence in the last paragraph of Section 3.1.2.1 was revised to state. "All contaminated building surfaces, equipment and demolition materials will be managed according to waste type, with respect to Attachment 9.0 of RFCA "

15 Same Reference, Line 5

*"The RFETS Building Rad Cleanup Std " Suggest putting this sentence first, then the current lead sentence*

RESPONSE

The referenced sentence is included in the following revised paragraph at the end of Section 3.1.2.1

"All contaminated building surfaces, equipment and demolition materials will be managed according to waste type, with respect to Attachment 9.0 of RFCA Following decontamination activities, the RFETS Building Radiation Cleanup Standard (BRCS) will be utilized to determine if residual radioactive constituents contained in remaining equipment and demolition debris is compliant with RFCA guidelines and appropriate as-low-as-reasonably-achievable (ALARA) considerations The BRCS is currently under development in coordination with the EPA, CDPHE, and DOE Until the BRCS is approved, more conservative criteria defined in DOE Order 5400.5 and associated RFETS radiation protection procedures will be used to determine if building surfaces, equipment and demolition debris are acceptable for unconditional release "

16 Same Reference, 3rd Para , Line 3

*The reference to "When 10 CFR Part 834 is approved ." needs a lot more explanation or in alternative state that when other requirements are promulgated (established) they will be met also*

RESPONSE

The reference was deleted from the text because the regulation has yet to be approved.

17 Section 3.2.3, Line 1

*Replace "Prior to decommissioning" with "As part of the decommissioning process"*

RESPONSE

The first sentence (in Section 3.1.3.1) was revised to state "As part of the decommissioning process, all utilities and electrified systems will be disconnected and capped"

18 Section 3 2.3, Line 2

*"The scope of building decommissioning also includes "*

RESPONSE

The second sentence (in Section 3 1 3 1) was revised to state "The scope of the building decommissioning effort also includes removal of all interior piping, ventilation and above-slab waste systems."

19 Section 3 2.3, Line 8

*Suggest rewrite to say "The debris will be disposed offsite at properly licensed facilities depending of the type of waste stream created during decommissioning Low level rad wastes is planned to be disposed of at \_\_\_\_\_ Sanitary (solid) waste is planned to be disposed of at \_\_\_\_\_"*

RESPONSE

Section 3 1 3 1 has been revised to indicate references to specific disposal sites, as stated below

"The building will be surveyed for radiological contamination prior to decommissioning and building rubble will be segregated and disposed at properly licensed facilities, depending on the type of waste stream created during decommissioning activities Friable asbestos will be disposed at Kettelman, California; non-friable asbestos and sanitary waste will be disposed at USA Waste, Erie, Colorado; low-level radioactive waste (LLW) will be disposed at Nevada Test Site (NTS); Radioactive ACM will be disposed at Hanford Site, Washington, and low-level mixed waste (LLM) will be stored temporarily on site until an appropriate off-site facility has been identified."

20 General question

*Has DOE agreed that disposal will be offsite?*

RESPONSE

A final radiation survey will be performed on building surfaces prior to demolition The data will be made available to DOE before demolition. In addition, DOE will have the opportunity to conduct an independent survey of the building. The building rubble will not be released offsite without DOE's concurrence

21 Page 21, Section 3.2 4, Line 2

*Need to cite Attachment No 6 after the reference "defined in the RFCA "*

RESPONSE

The first sentence in Section 3 1 3 2 was revised to state "Remedial actions will be contingent upon compliance of sample analyses results with Tier II , 'action level' criteria defined in Appendix 6 of the RFCA "

22 Section 3.5, 3rd Paragraph

*Eliminate 1st sentence entirely*

RESPONSE

The entire section (3 1 3) has been revised and all references to subcontractor involvement have been removed



23 Section 3.5, 4th Paragraph

*Rewrite entirely to take out all reference to subcontractor and RMRS. Suggest "The solid waste will be packaged according to the criteria appropriate to its waste type and transported to offsite licensed disposal facilities for disposal. All packaging and shipping regulations will be met."*

RESPONSE

All references to subcontractor involvement and RMRS have been removed. Section 3.4.2 has been revised to state the following

"Process knowledge and relative operating history will be used to manage contaminated areas apart from unaffected areas. Contaminated material will be segregated, categorized, and packaged according to the specifications for disposal in permitted hazardous waste, LLW, or LLM facilities. Waste characterization data and packaging requirements for LLW will meet the procedures and policies for managing LLW as outlined in the RFETS Low-Level Waste Management Plan (Low Level Waste Management Plan 44-RWP /EWQA - 0014, Rev. 1, 1996). Waste Operations will designate temporary storage locations for LLW, LLM, or hazardous waste, as conditions warrant."

24 Page 24, Section 3.5, Last Paragraph

*Need to use PU&D as words before using acronym*

RESPONSE

The words "Property Utilization and Disposal" were added to Section 3.4.1 "Non-Regulated Waste"

25 Section 4.0

*A whole lot of problems with the NEPA Section--- too numerous to list*

RESPONSE

NEPA section (4.0 "Environmental Impacts") has been revised to include the Proposed Action and Alternatives, including an impact analysis of the Proposed Action

26 General Comment

*The PAM generally fails to be legally sufficient for two main reasons*

*a First, because the PAM's specific reliance on the draft Decommissioning Program Plan (DPP), a document which does not yet even exist in a draft form. Until the DPP is approved, it is inappropriate to incorporate it by reference into other Rocky Flats Cleanup Agreement (RFCA) decision documents*

*b Second, the PAM fails to adequately incorporate National Environmental Policy Act values. This is partly because the PAM defers to the DPP on this matter as well as deferring to the Site's Cumulative Impacts Document which is yet another document that has not been officially released to the public. As a RFCA decision document, this PAM must include, at a minimum, thoughtful consideration of alternatives to the proposed action. This includes the "no Action" alternative a discussion of the potential for irretrievable/irreversible commitment of natural resources*

## RESPONSES

- a All references to the DPP have been removed from the document.
- b NEPA section (4 0 "Environmental Impacts) has been revised to include the Proposed Action and Alternatives, including an impact analysis of the Proposed Action

### 27 General

*Kaiser-Hill's cover memo transmitting this draft PAM to your office indicates that this draft PAM has previously been submitted to the RFCA regulators for comment and was to be released to the reading rooms for public comment starting May 23, 1997. Unfortunately, this office was provided its first opportunity to review this document when it was unofficially provided a copy June 4, 1997. In the future, this office should be given the opportunity to participate in the review process of PAMs, including those concerning decommissioning of buildings, much earlier in the consultative process*

## RESPONSE

Attempts will be made to ensure that all documents in review will be submitted to the appropriate agencies on a more timely basis

### 28 General

*At this time, this PAM is not legally sufficient for release to the public reading rooms for public comment. This PAM should be resubmitted for legal review once the comments provided on the enclosed copy of the draft PAM have been addressed*

## RESPONSE

The PAM has already been submitted for public comment. The public response period ended July 3, at which time no public comments had been received.

**Originator: Chris Gilbreath, CDPHE-HAZMAT**

### 1 Section 2 1 2, IHSS 148

*The sampling and analysis plan (SAP) for IHSS 148 must be submitted and approved by the Division prior to implementation. Public comment is not required, therefore, the final PAM should describe the approval mechanism for the sampling, analysis and remediation of both IHSS 148 and UBC 123 (e.g., the SAP shall be submitted to the Division at least 30 days prior to implementation). In the event that the SAP has not been completed, a compliance schedule which identifies the date for submittal of the SAP to the Division should be added to the final PAM*

## RESPONSE

The following sentence was added to Section 3 0 indicating the approval mechanism for the SAP "The SAP will be submitted to CDPHE for approval at least 45 days prior to implementation "

### 2 Section 2 2 4, Building 123S

*"The facility has been closed for approximately one year " Has the building been certified RCRA clean closed, non- operational or shutdown? Clarify the term "closed"*

**RESPONSE**

The following statement was added to Section 2.2.4: The facility was formally as part of the RCRA process in 1996. Closure followed 6 CCR 1007-3, 262.34(a) and 6 CCR 1007-3, 265.111 and 6 CCR 1007-3, 265.114 requirements

**3 Section 2.3.1, Asbestos**

*Identify the State of Colorado regulation which requires the submittal of either a Demolition Notification form or an Asbestos Abatement Notification form*

**RESPONSE**

The following statement was added to the second paragraph of Section 2.4.1 "A permit is required for asbestos abatement operations in accordance with Regulation 8, Control of Hazardous Air Pollutants, Part B, Section 3, (1)(a)(i); Notification will be made to the State of Colorado in accordance with Regulation 8, Part B, Section 3, (1)(a)(iii). A separate form for demolition is required for demolition in accordance with Regulation 8, Part B, Section 3, (3)(b)(i, ii, iii) "

**4 Section 2.3.2, Beryllium**

*This section reads, "No samples identified the presence of beryllium." The Reconnaissance Level Characterization Report, however, states "No samples identified the presence of beryllium above the RFETS site housekeeping level of 25 ug/ft<sup>2</sup>". Define the term "Site housekeeping level"*

**RESPONSE**

The section in 2.4.2 was revised to state the following. "All results were below the RFETS site housekeeping level of 25 µg/ft<sup>2</sup>, a standard developed by the Atomic Energy Commission in approximately 1949 and adopted and used by RFETS since the 1960's." We have been unable to uncover any more history regarding this level than is contained in this statement. This level has been incorporated into the Rocky Flats Health and Safety Practices Manual, Rev 0, 1-15310-HSP-13.04

**5 Section 2.3.4, RCRA**

*Hazardous Waste in SAAs - For previously generated hazardous waste, characterization should have already been completed using either process knowledge or sampling and analysis results. Hasn't the waste already been containerized and labeled? Revise the paragraph accordingly*

**RESPONSE**

The paragraph in Section 2.4.4 was reworded to state the following:

Satellite Accumulation Areas (SAAs) were established in Rooms 103A, 124, 125, 127, and 156 to ensure proper storage of RCRA hazardous wastes near the point of generation. The SAAs are no longer active. The chemicals have been properly containerized, labeled and dispositioned.

**6 Section 2.3.5, Perchloric Acid**

*As identified in the PAM, crystallized perchloric acid may be shock sensitive and represent a hazard. As a result, ensuring safe and proper decontamination of the five*

*hoods is critical. Identify the procedure(s), training and personnel to be used to flush and rinse potentially shock sensitive crystals in the hoods*

**RESPONSE**

The following was added to Section 2.4.5 "Site Health and Safety have reviewed requirements for decontamination of perchloric acid hoods. The steps that outlined in the requirements include interviews with laboratory personnel; walkdowns, necessary repairs, and washdowns of all hoods and associated ductwork, and dismantlement of ductwork into easily managed sections. The requirements also define proper segregation and disposal of all solid duct material." The guideline for removal of the perchloric acid hoods is attached to this responsiveness summary

**7 Section 2.3.9, Metals**

*"All paints indicated detectable levels of one or more of the metals (lead, chromium, cadmium, and arsenic)." Are the levels of metals found in the paint greater than Toxicity Characteristic Leaching Procedure levels? How will the paint be managed?*

**RESPONSE**

Results will be reviewed according to TCLP criteria. Painted surfaces will be managed as construction debris. The following was added to Section 2.4.9 "All paints indicated detectable levels of one or more of the metals. Samples will be analyzed using the Toxicity Characteristic Leaching Procedure (TCLP). Should the TCLP analysis indicate the painted surfaces are leachable for heavy metals, they will be managed as hazardous waste. Otherwise, painted surfaces of construction materials will be managed as standard construction debris."

**8 Section 3.22, Characterization**

*"Non-Impacted Areas are areas that have no potential for residual radiological contamination." As previously described in Section 2.2.1 "Building 123 was one of the first ten buildings constructed at Rocky Flats. The building has always been used as an analytical laboratory and a dosimetry facility." Based on the history and age of the building, it is not technically defensible to say that there are areas in Building 123 that have no potential for residual radiological contamination.*

**RESPONSE**

The subject statement was provided as a definition for non-impacted areas. The actual classification of each room or area in Building 123 will be made by Radiological Engineering based on characterization data and historical use.

**9 Section 3.22, Characterization**

*NUREG 5849 proposes a somewhat different approach which appears to be appropriate for Building 123. It states, "Scans of unaffected areas should cover a minimum of 10% of the floor and lower wall surface area. At least 30 randomly selected measurement locations or an average measurement of 1 per 50 m<sup>2</sup> of building surface area, whichever is greater, for total and removable activity, should be performed for each survey unit. These locations should be performed for each survey unit. These locations should include all building surfaces. Identification of activity levels in excess of 25% of the guideline, either by scans or measurements, will require reclassification of the area to the "affected" category." Will the areas considered non-radioactively contaminated be classified as "non-impacted areas" or as Class 3 impacted areas?*

RESPONSE

The following statement was added to Section 3.1.2: "Areas considered to be non-radioactive will be classified as Class 3 impacted areas." Also, "unaffected" and "Class 3 Impacted" areas are essentially the same

10 Section 3.2.2

*Soil sampling of the surrounding process waste lines and the IHSS 148 areas should include sampling for nitrates*

RESPONSE

Nitrates were added to the analyte list in Section 3.1.2.2

11 Section 3.5, Waste Management

*"Working under the direction of RMRS, the qualified and trained subcontractor will also load all hazardous, LLW, and LLM waste into approved containers. and make certain that all regulatory requirements are met " Define the training requirements for the subcontractor(s) generating and managing hazardous and mixed wastes*

RESPONSE

The following statement was incorporated into Section 3.4 "Waste management training requirements are outlined in *Part IX Personnel Training of the Rocky Flats Environmental Technology Site RCRA Permit* (DOE 1997) The training matrix defined in Part IX details the training requirements for all personnel managing hazardous waste Although the document is part of a permit, all RCRA training requirements of 6 CCR 1007-3, 265.16 are met "

12 Section 5.1.1, Airborne

*"Fugitive dust emissions are appropriate for the demolition " The statement should read fugitive emission controls*

RESPONSE

The sentence was reworded as follows. "Fugitive dust emissions controls are appropriate and relevant for the demolition."

13 Section 5.1.1, Airborne

*Demolition activities mentioned are subject to the AQCC's Regulation No. 1, Section III.D.2.h, which does not require a permit, however an abatement plan must be in place and meet the requirements listed in the regulation*

RESPONSE

An asbestos abatement plan will be prepared by the asbestos contractor and will be reviewed, if necessary, by RMRS The abatement contractor is not required by the regulations to submit the abatement plan to CDPHE.

14 Section 5.2

*This section should clearly specify whether the identified regulatory requirements are applicable or whether they are merely relevant and appropriate This is an important distinction because a requirement determined to be applicable must be met in its*

*entirety, while a requirement that is relevant and appropriate needs to be met considering site conditions and protection of human health and the environment*

**RESPONSE**

An attachment (B) indicating all ARARs associated with the project was added to the document

**15 Section 5 2 1, RCRA**

*This section does not include all of the ARARs associated with RCRA. For example, if batteries will be managed as universal waste then the requirements of Part 279 of the CHWR are applicable requirements. In addition, the land disposal restriction (LDR) treatment standards of Part 268 are applicable to any hazardous waste removed from the area of contamination and to any hazardous waste that is excavated from the area of contamination, managed within another unit, and returned to the area of contamination. Finally, the closure requirements of Part 265 are applicable to areas associated with RCRA Unit 40 if hazardous waste was managed in that unit after November 8, 1980. If hazardous waste was not managed after that date, then those requirements may still be relevant and appropriate.*

**RESPONSE**

An attachment (B) indicating all ARARs associated with the project was added to the document.

**16 Section 5 2 1, RCRA**

*This section states that fluorescent lights will be managed as universal waste. However, the definition of universal waste does not include fluorescent lights, at this time.*

**RESPONSE**

Correct. 40 CFR 273, *Universal Waste Management* applies to batteries (except lead-acid batteries managed under 40 CFR 266) pesticides, and mercury switches. Therefore, reference to the Universal Waste Rule was deleted.

**17 General Comment**

*The Building 123 PAM does not clearly identify anticipated monitoring activities throughout the decommissioning process. The PAM and the Building 123 Reconnaissance Level Characterization Report identify actual and potential radiological and chemical contamination within the building and surrounding soils. The PAM, however, does not describe necessary air monitoring during decontamination and demolition of the building. In light of the recent problems the Site experienced with the remediation of the T3 and T4 trenches, air should be continuously monitored for radionuclides and beryllium, at a minimum. The PAM doesn't necessarily need to completely describe and define monitoring activities but at a minimum, the PAM must reference the appropriate monitoring procedure(s) for all decontamination and demolition activities to be conducted. This monitoring plan must be available upon request prior to demolition activities to be conducted. This monitoring plan must be available upon request prior to implementation of proposed decommissioning activities. In addition, the SAP for IHSS 48 and UBC 123 should clearly describe any necessary air and water monitoring requirements.*

#### RESPONSE

Section 3.2.2, *Ambient Air Monitoring* was added to the document to address air monitoring for the project. In addition, the project intends to take the following actions in response to a possible need for remediation of soil beneath the building slab with respect to soil sample analysis results, the project will operate a minimum of two low volume particulate samplers in the vicinity of the project site. One sampler will be located in the predominant upwind direction, and at least one sampler will be placed in the prevailing downwind direction. Specific sampler locations will be selected based on vehicular and pedestrian traffic patterns. Air Quality Management will be consulted to select sampler locations. The samplers will be operated continuously during active decommissioning activities and will be changed weekly.

#### 18 General Comment

*It seems premature to submit a PAM for the under-building contamination before necessary characterization has been/can be done. This lack of characterization leads to a lack of the detail that is required in a decision document like a PAM. Section 3.2.4 would typically be expanded to include detailed remediation methods. Once the SAP has been completed, a Remediation Plan which identifies the remediation activities to be utilized shall be submitted to the Division prior to implementation. Statements that the remediation "will be done according to established procedure" and that "several locations have undergone similar remediation" seem to be used to excuse the lack of detail. This section should not use vague terms like "could", but should describe or reference specific procedures.*

#### RESPONSE

Remediation options for soil and pipelines were added to the document as Sections 3.1.3.2 and 3.1.3.3. RCRA Unit 40 will also be addressed in a separate RCRA closure plan.

#### 19 General Comment

*Other specifics that should be included, if applicable, are*  
- *air monitoring/air pollution control permits,*  
- *other specific requirements or applicable regulations (cited),*  
- *specific cleanup target levels/performance standards, and*  
- *Radiological Work Permit should be mentioned in Section 5.1.2*

#### RESPONSE

Section 5.1.1 (Airborne) was expanded to include CAQCC regulations that serve as applicable requirements. Cleanup target levels will be dictated by Tier II action level criteria defined in the RFCA. Section 5.1.2 was deleted from the document because radiological standards are designed for worker protection and as such are not ARARs.

#### 20 General Comment

*The SAP and Remediation Plan for IHSS 148 and UBC 123 should be included in the Section 3.2.1 list of documents to be prepared. These documents do not go out for public comment, but do require Division approval.*

#### RESPONSE

The SAP was added to the list in Section 3.1.1. Remediation of the soil and pipelines will be added to the RCRA Unit 40 Closure Plan and the SAP during the 2nd revision, but not in a separate document. Also, the following sentence was added to the second

paragraph of Section 3 1 1. "Also, the SAP, Remediation Plan and RCRA Unit 40 Closure Plan will be submitted to CDPHE for review and approval prior to initiation of work governed by those documents "

21 General Comment

*The anticipated evaluation of the Environmental Checklist needs to be included in this PAM.*

RESPONSE

The Environmental Checklist will not be included in the document. However, it will be available as a guidance document in the Project Files. The Environmental Checklist is attached to this responsiveness summary.

22 General Comment

*The schedule allows for completion of the project within 6 months from the start of building demolition, but shows a 1-1/2 month overlap of building demolition with IHSS remediation. How will both these activities happen simultaneously?*

RESPONSE

Initial soil sampling will begin outside of the building before demolition. Remaining samples will be collected following demolition.

23 General Comment

*The PAM does not identify tank systems and/or valve vaults related to the Original Process Waste Lines. What tank systems and/or valve vaults are connected to the Building 123 process waste system and are they to be decommissioned as part of this PAM? Tank 428 for instance, is designed to collect waste generated from Building 123 and should be decommissioned as part of this PAM.*

RESPONSE

Section 2 3.2 (IHSS 121), last paragraph, was revised to include the following statement: "Currently, all process waste throughout Building 123 is collected in floor sumps. Each sump collects and temporarily stores liquid waste which is then pumped through overhead lines into a main floor sump in Room 158. The waste is then gravity-fed through P-1 to Valve Vault 18, then to Tank 428 at Building 441, and finally to Building 374 for treatment. Tank 428 will not be removed as part of this action, as it is needed for other RFETS waste systems."

24 General Comment

*The revised PAM should include a detailed project schedule in order to effectively track the progress of activities for this project. This schedule should identify submittals for the SAP, the remediation plan and all other significant documents to be generated.*

RESPONSE

The schedule is included as Attachment C.



**Originator: Ed Smith, CDPHE**

**1 Section 5 0, ARARs**

*This section should clearly specify whether the identified regulatory requirements are applicable or whether they are merely relevant and appropriate. This is an important distinction because a requirement determined to be applicable must be met in its entirety, while a requirement that is relevant and appropriate needs to be met considering site conditions and protection of human health and environment.*

**RESPONSE**

A general listing of ARARs was included in Section 5 0, and a more specific list of ARARs that are associated with the project was included as Attachment B. Both lists distinguish between applicable and relevant and appropriate requirements.

**2 Section 5 1 1**

*An analysis is needed to determine whether the NESHAP standards for asbestos are applicable or whether they are relevant and appropriate.*

**RESPONSE**

An evaluation of requirements associated with asbestos abatement/disposal including whether the requirement is applicable, relevant and appropriate, or To Be Considered was included in the PAM as Attachment B.

**3 General**

*An analysis is required to determine whether TSCA is applicable or relevant and appropriate for disposal of PCB contaminated light ballasts and/or asbestos that may be generated during D&D of Building 123.*

**RESPONSE**

An evaluation of TSCA regulations as ARARs was conducted and included as part of the general D&D ARARs. In addition, text was added under Section 2 4 7 stating the following: "Potential exists for the presence of PCBs in fluorescent light ballasts. Consequently, all light ballasts will be evaluated for PCB contamination and properly segregated after the building has been vacated and lights are no longer required. All light ballasts marked "PCB Free" or "No PCBs" will be managed as non-hazardous solid waste and disposed at a sanitary landfill. Ballasts marked "PCBs" or not marked and not leaking will be packaged for disposal at a TSCA-permitted facility. Leaking PCB light ballasts and unmarked light ballasts will be managed as fully-regulated PCB Articles."

**4 Section 5 2 1**

*This section states that fluorescent lights will be managed as universal waste. However, the definition of universal waste does not include fluorescent lights, at this time.*

**RESPONSE**

The reference to Universal Wastes has been deleted.

5 Section 5.2.1

*This section does not include all of the ARARs associated with RCRA. For example, if batteries will be managed as universal waste then the requirements of 6 CCR 1007-3 Part 279 are applicable requirements. In addition, the land disposal restriction (LDR) from the area of contamination and to any hazardous waste that is excavated from the area of contamination, managed within another unit, and returned to the area of contamination. Finally, the closure requirements of 6 CCR 1007-3 Part 264 are applicable to areas associated with RCRA Unit 40 if hazardous waste was managed in that unit after November 8, 1980. If hazardous waste was not managed after that date, then those requirements may still be relevant and appropriate.*

RESPONSE

A general listing of ARARs was included in Section 5.0, and a more specific list of ARARs that are associated with the project was included as Attachment B.

6 General Comment

*As stated above, the PAM should specify whether the identified requirements are applicable or relevant and appropriate. A requirement cannot be both applicable and relevant and appropriate.*

RESPONSE

A general listing of ARARs was included in Section 5.0, and a more specific list of ARARs that are associated with the project was included as Attachment B. The lists include an evaluation as to whether an ARAR is applicable, relevant and appropriate, or To Be Considered.

7 General Comment

*Section 2.3.4 indicates that sampling has confirmed the presence of asbestos but the associated TSCA requirements for disposal of asbestos waste and the NESHAP standards for asbestos have not been identified as ARARs. Please determine if these requirements should be included as ARARs for this project.*

RESPONSE

A general listing of ARARs was included in Section 5.0, and a more specific list of ARARs that are associated with the project was included as Attachment B. The lists include an evaluation of requirements associated with asbestos management/disposal including whether an ARAR is applicable, relevant and appropriate, or To Be Considered.

8 Section 5.0

*This section states that no hazardous waste generation is anticipated from demolition. However, Section 2.3.3 states that lead based paint will be collected, characterized and managed in accordance with applicable hazardous waste regulations. This inconsistency should be corrected.*

RESPONSE

Could not locate statement that "no hazardous waste generation is anticipated from demolition." Hazardous wastes will be managed according to Section 5.2.1, RCRA.

9 Section 5 0, 4th Paragraph

*The last sentence indicates that a temporary unit, specifically a 90-day accumulation area, may be established under 6 CCR 1007-3, 264.553. The text is misleading in this respect. A temporary unit may be established pursuant to the referenced regulation and waste may be managed in such unit for up to a one year period. On the other hand, a 90-day accumulation area may be established pursuant to 6 CCR 1007-3, Section 264.553 or in a 90-day accumulation area established pursuant to 6 CCR 1007-3, Section 262.34, whichever is most appropriate.*

RESPONSE

Attachment B (Specific ARAR list) lists 264 Subpart S (Corrective Action) which includes Temporary Units, and 262.34(a) which includes 90-day units. ARARs will be used according to unit type. The accumulation time limit associated with these units is administrative in nature and is not applicable.

10 Table 5-1

*Asbestos requirements that are determined to be ARARs, if any, should be added to this table. Also, 6 CCR 1007-3, Part 262 and 268 should be added for waste generation and LDR treatment standards, as discussed above. Finally, DOE Order 5820.2A should be added as a TBC for radiation protection.*

RESPONSE

The applicable ARARs have been included under a general listing in Table 5-1 and are specifically listed in Attachment A.

Originator: James Hindman, CDPHE

1 Section 2.3.3, Last Paragraph

*Light ballasts and fluorescent lights are not regulated as universal waste streams in Colorado.*

RESPONSE

All references to Universal Waste Streams have been removed from the document.

2 Section 7 0, Documentation

*Sampling and analysis data must be included in the completion report.*

RESPONSE

Sample and analysis data will be included in a Sample and Analysis report to be prepared following receipt of sample analysis results.

3 Figure 6-1, Schedule Layout

*The schedule shows that the Reconnaissance Level Characterization Report (RLCR) was to be submitted at the end of April, prior to submitting the PAM to CDPHE. Do we have a copy of the RLCR? If not, we should request it.*

RESPONSE

A copy of the RLCR was submitted to CDPHE for review.

**Originator: CDPHE (ARAR Comments, Attachment B)**

*1 Page 3*

*What about 40 CFR 61.152 for disposal of asbestos-containing waste from demolition and renovation operations?*

**RESPONSE**

40 CFR §61.152 is only applicable to inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations. Offsite disposal of friable and non-friable asbestos wastes is fully regulated under the Colorado Solid Waste Management Requirements found at 6 CCR 1007-2, Part 1, (B), Section 5. This requirement will be identified as applicable to offsite asbestos disposal.

*2 Page 4*

*Reference should be to State HW regs. 6 CCR, 1007-3*

**RESPONSE**

State requirements are only identified as ARAR when they are duly promulgated, of general applicability, and more stringent than the federal requirements. See SARA 121(d)(2)(A)(ii), the National Contingency Plan at 40 CFR §300.400(g)(4), and page 1.1 of the CERCLA Compliance With Other Laws Manual, August 8, 1988, OSWER Directive 9234.1-01. A footnote was added to the table which states "Federal Requirements are identified except where State requirements are more stringent."

*3 Page 4*

*If HW will be generated and managed in a 90-day area then the following are applicable: 265, subpart I, labeling; 265, subpart C & D; and 265.16 (training)*

**RESPONSE**

As noted below, all remediation waste generated during the project will be handled in Temporary Units, with 40 CFR §264.553 as the applicable ARAR.

*4 Page 4*

*If HW will be generated + managed in a SAA then 262.34(c) applies which includes the above*

**RESPONSE**

As noted below, all remediation waste generated during the project will be handled in Temporary Units, with 40 CFR §264.553 as the applicable ARAR.

*5 Page 5*

*How is this applicable? (reference to 40 CFR Subpart S, Corrective Action for Solid Waste Management Units)*

**RESPONSE**

40 CFR §264.553, Temporary Units, is applicable to "temporary tanks and container storage areas used for treatment or storage of hazardous remediation wastes."

6 Page 6

*Yes (applicable) . a plan is not required, put personnel must have RCRA training if HW is generated (reference to 265 16 Personnel Training)*

RESPONSE

Just as 29 CFR §1910 120 is not ARAR because of §300.430(b)(6) and the mandates at 40 CFR §300.150 and 40 CFR §311, the RCRA training requirements are not ARAR in that they do not provide additional substantive criteria not already embodied in 29 CFR §1910 120. However, text was added to Section 5.2 1 (RCRA) to define training requirements. Also, the entry in the "Applicable" column in the ARAR table (Attachment B) was changed from "No" to "Yes"

7 Page 6

*Yes (applicable) if such waste will be managed (reference to 265 17, General requirements for Ignitable, Reactive, or Incompatible Wastes)*

RESPONSE

Elements of these requirements may be relevant and appropriate by operation of §264 553(a) that states: ". design, operating, or closure requirements may be replaced by alternative requirements which are protective of human health and the environment" (emphasis added). Section 5.2 1 (RCRA) was expanded to define criteria for temporary units including methods for storage and segregation. Also, the entry in the "Applicable" column in the ARAR table (Attachment B) was changed from "No" to "Yes"

8 Page 7

*Most likely not applicable since mixed waste is excluded and otherwise all that is required is mgmt of waste in DOT closed containers*

RESPONSE

The word "deferred" in the "Applicable" column of Page A-7 was changed to "NA"

9 Page 8

*Should refer to 6 CCR 1007-3 Part 267*

RESPONSE

State requirements are only identified as ARAR when they are duly promulgated, of general applicability, and more stringent than the federal requirements. See SARA 121(d)(2)(A)(ii), the National Contingency Plan at 40 CFR §300 400(g)(4), and page 1 1 of the CERCLA Compliance With Other Laws Manual, August 8, 1988, OSWER Directive 9234 1-01. A footnote was added to the table which states: "Federal Requirements are identified except where State requirements are more stringent."

10 Page 8

*6 CCR 1007-3, Part 100 (as substitute for 40 CFR Part 270)*

RESPONSE

State requirements are only identified as ARAR when they are duly promulgated, of general applicability, and more stringent than the federal requirements. See SARA

121(d)(2)(A)(ii), the National Contingency Plan at 40 CFR §300.400(g)(4), and page 11 of the CERCLA Compliance With Other Laws Manual, August 8, 1988, OSWER Directive 9234.1-01. A footnote was added to the table which states: "Federal Requirements are identified except where State requirements are more stringent."

11 Page 9

*Unless this is guidance the regulation would be applicable if such waste will be encountered (reference to Non-leaking Ballast Marked "Contains PCBs")*

RESPONSE

The entry in the "Relevant and Appropriate" column for "Non-Leaking Ballast Marked 'Contains PCBs'" was changed to state the following "Yes, to final offsite management of this waste stream"



Rocky Mountain  
Remediation Services, L.L.C.  
*protecting the environment*

Rocky Flats Environmental Technology Site  
P.O. Box 464  
Golden, Colorado 80402  
Phone (303) 966-7000  
Fax (303) 966-8244

April 8, 1997

Steve Nesta  
CP&I, T130C  
Kaiser-Hill L.L.C.  
Rocky Flats Environmental Technology Site

**ENVIRONMENTAL CHECKLIST - DECOMMISSIONING OF BUILDING 123  
- CLG-075-97**

**PURPOSE**

The purpose of this letter is to submit the attached Environmental Checklist (EC) for the Building 123 Decommissioning

**DISCUSSION**

The attached EC is provided for your evaluations for the Decommissioning of Building 123. Your review comments and actions will be incorporated into the Project Plans and documentation.

**RESPONSE REQUIREMENTS**

Please review and provide comments to the Project Manager, Doug Steffen, T130F, X2164, and copy Gary Guinn, also in T130F, X8043 at your earliest convenience.

C. L. "Vern" Guthrie, Acting Vice President  
Engineering, Construction, and Decommissioning

GDG slc

Attachment  
As Stated

cc  
Kent Dorr - T130F  
Mike Jennings - B130

**ENVIRONMENTAL CHECKLIST**  
**ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE**

Form Revised 7/19/96

- 1 Project/Activity Name: Decommissioning of Building 123
- 2 Date 3/26/97
- 3 Charge Number: NG887030
4. Work Package Number: NG887030
- 5 Project Manager Doug Steffen, RMRS
- 6 RFFO Project Sponsor: William Fitch
- 7 K-H Line Manager: Kent Dorr
- 8 ETA Preparer (Bldg ,Ext) Gary Guinn, T130F, X8043
- 9 Project Description:

The scope of work includes all activities required for the safe and compliant decommissioning of Building 123. The scope includes characterization, asbestos abatement, decontamination, dismantlement, removal of equipment and furniture, removal of facility power and safety systems, and demolition to the facility slab. No excavation is expected. As part of characterization, evaluations will be completed to assess any potential impact on the public, site personnel, or the environment.

This project will be completed utilizing a Proposed Action Memorandum (PAM) as specified in the Rocky Flats Cleanup Agreement (RFCA) for Decommissioning under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Removal Actions. The PAM actions will be implemented using the Site's Integrated Work Control Plan (IWCP).

Asbestos abatement will be conducted by a state approved subcontractor. This abatement and the equipment/furniture removal will be completed prior to the scope identified in the PAM but will utilize site procedures and infrastructure.



		<u>YES</u>	<u>NO</u>	<u>NOTES</u>
10	Will the project require or potentially require permit application(s) or permit modification(s) under the			
A	Clean Air Act? (e.g., APENs, Rad-NESHAP, fugitive dust, etc.)	<u>X</u>	<u>      </u>	Fugitive Dust
B	Clean Water Act? (e.g., discharges, chemicals, etc.)	<u>      </u>	<u>X</u>	
11	Resource Conservation and Recovery Act (RCRA)			
A	Does the project generate, treat, store, or dispose of hazardous, radioactive, or mixed waste?	<u>X</u>	<u>      </u>	
B	Does the project involve a removal?	<u>      </u>	<u>X</u>	
C	Does the project include RCRA closure?	<u>X</u>	<u>      </u>	
	-partial?	<u>X</u>	<u>      </u>	
	-full?	<u>      </u>	<u>X</u>	
D	Does the project include excavation or capping to meet RCRA requirements?	<u>      </u>	<u>X</u>	
E	Will cost and duration stay within \$5 million and 60 months? (Explain in Section 9, Project Description)	<u>      </u>	<u>      </u>	N/A
F	Will a RCRA permit or permit modification be required?	<u>      </u>	<u>X</u>	
12	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)			
A	Is the project part of an activity required in the Rocky Flats Cleanup Agreement?	<u>X</u>	<u>      </u>	
B	If the answer to A is YES, is the project described in a document that has been approved by EPA or CDPHE, or will be approved by at least one of those agencies before project work begins?	<u>X</u>	<u>      </u>	PAM IN DRAFT
C	If the answers to both A and B are YES, has that document been reviewed by the National Environmental Policy Act (NEPA) Group for inclusion of NEPA values?	<u>      </u>	<u>X</u>	NEEDED *
13	Will the project create TSCA-regulated waste (asbestos & PCBs)?	<u>X</u>	<u>      </u>	ASBESTOS + POTENTIAL FOR PCB
14	Have all steps been taken to ensure compliance with procedures 1-G98-EPR-END 04, Migratory Bird Evaluation and Protection, and 1-D06-EPR-END 03, Identification and Protection of Threatened, Endangered, and Special-Concern Species?	<u>      </u>	<u>X</u>	EVALUATION WILL BE CONDUCTED
15	Will the project be in or near an Individual Hazardous Substance Site (IHSS)?	<u>X</u>	<u>      </u>	YES, 12/14/8

		<u>YES</u>	<u>NO</u>	NOTES
16	Will this project construct or require a new or expanded waste disposal, recovery, storage, or treatment facility?	_____	<u>X</u>	
17	Is the project part of an agreement between DOE and another federal or state agency? (Specify and explain any schedule urgency and deadlines in Section 11, Project Description )	_____	<u>X</u>	
18	Is the project			
	A A new process, building, etc ?	_____	<u>X</u>	
	B A modification to an existing process, building, etc ?	_____	<u>X</u>	
	C An installation of capital equipment	_____	<u>X</u>	
19	Will the project be located in, or adversely affect designated			
	A Wetlands? (i.e., dredge, fill operation)	_____	<u>X</u>	
	B Natural areas?	_____	<u>X</u>	
	C Prime agricultural land?	_____	<u>X</u>	
	D Special water sources?	_____	<u>X</u>	
	E Historical, archaeological, or architectural sites or buildings? (NHPA, HUD)	_____	<u>X</u>	
	F Impact surfacewater or groundwater	_____	<u>X</u>	HUD EVAL IS BE CONDUCTED
20	Will the project result in, or have the potential to result in, long term changes to the environment?	_____	<u>X</u>	
21	Will the project result in changes or disturbances of the following existing conditions			
	A Noise levels?	_____	<u>X</u>	
	B Solid wastes?	_____	<u>X</u>	
	C Radioactive wastes? (including disturbed or excavated contaminated soil)	_____	<u>X</u>	
	D Hazardous waste?	_____	<u>X</u>	
22	Will the project have effects on the environment which are likely to be publicly controversial?	_____	<u>X</u>	
23	Will the project establish a precedent for future projects that will have significant effects, or represent a "decision in principle" about a future consideration?	_____	<u>X</u>	
24	Is the project related to other projects or to a larger program?	<u>X</u>	_____	TEN YEAR PLAN
25	Have pollution prevention measures been considered? (Discuss in Section 11, Project Description )	<u>X</u>	_____	

26. Does/Will the project present a radiation health and safety concern during construction or operation? (Price-Anderson Act)

YES

NO

NOTES

AREAS WILL  
BE DECONTAMINATED  
PRIOR TO DEMOLITION

NOTES:

## Ductwork Washdown/Dismantlement Guidelines

### Building 123 Perchloric acid hoods

- 1) Laboratory personnel were interviewed regarding this process. The individual interviewed has 23 years experience as a chemist in the 123 complex and has intimate knowledge of the location of use and quantities of perchloric acid used in the past years.
- 2) The hoods in rooms 112, 105, 103, and 157 were identified as locations of use in the historical past. Seven systems are known to have had HClO<sub>4</sub> digestions done in them over the course of the years.
- 3) The hoods and associated ductwork will have to be numbered to ensure workers are cleaning/dismantling one system at a time.
- 4) The washdown systems of each of the hood/ductwork systems need to be verified as functioning. This will be done by pressurizing the system and listening to the water spraying from each of the nozzle locations.
- 5) If any non functional spray nozzles or lines are located during the inspection, they will be repaired or replaced as needed to ensure wetting of the entire duct interior.
- 6) At this time, a thorough washdown of the ductwork interior should be done. All washdowns should be run for a minimum of five minutes or until the rinsate from the ductwork runs clear for one minute.
- 7) While the duct interior is still wet, carefully open an access panel on the duct at the highest point on the system. Using the "water pick" (a 3/4 inch garden hose with a ball valve necked down to a 3/8 inch copper line) deluge the interior surfaces as far as possible, washing in both directions toward the process waste system.
- 8) Dismantle a manageable section of ductwork and test interior surfaces for residual perchlorates with a solution of Methylene Blue. **Note well: All interior surfaces must be thoroughly wetted prior to working on the ductwork system.**
- 9) Reclean duct if violet precipitate is noticed, paying particular attention to elbows, seams, welds, and any other interior irregularity.
- 10) When ductwork sections are verified as free of residual perchlorates, segregate the stainless steel as directed by the Radiological Control Technician and the Environmental Coordinator.

## **Proposed Washdown/Dimantlement**

### **Building 123 Perchloric acid hoods.**

#### Summary

- 1) Interview Laboratory Personnel with intimate process knowledge
- 2) Identify number and location of all hoods with historical use of HClO<sub>4</sub>
- 3) Walkdown hoods and ductwork
- 4) Number hoods and associated ductwork
- 5) Verify operational state of duct washdown systems
- 6) Repair sub standard washdown systems when identified
- 7) Conduct a thorough washdown of duct interiors (5 minutes or until rinsate runs clear) one hood system at a time
- 8) Open access panels on the ductwork accessed from roofs
- 9) Using a "water pick", thoroughly rinse the entire duct interior into the process waste system
- 10) Dismantle ductwork into easily managed sections
- 11) Using Methylene Blue, paint or spray a light coat on the interior of the still wet ductwork, and carefully examine for the violet precipitate indicating residual perchlorates
- 12) If precipitate is noted, clean interior again
- 13) If/when no precipitate is noted, segregate solid duct material per Environmental Coordinator and RCT direction

**PPE Requirements (in addition to RCT requirements)**

Safety Glasses with side shields

Leather or Kevlar gloves

Chemical goggles

Face shield

Safety toed footwear

Hard hat

Impermeable apron or acid suit depending on the potential for splash

Fall Protection harness

**Other Materials**

Bucket truck

Ladders

Saws-All or Nibbler

Drill motor

hole saw blades

GFCI electrical power

water